

REMARKS

The Office Action dated January 11, 2008, has been received and carefully noted. The following remarks are submitted as a full and complete response thereto.

Claims 1-17 are currently pending and respectfully submitted for consideration. No amendments have been made at this time.

Allowable Subject Matter

The Applicants wish to thank the Examiner for indicating allowable subject matter in claims 4-9 and 12-17. Claims 4-9 and 12-17 are not amended as they depend from claim 1, which is allowable for the reasons submitted below.

Rejections under 35 U.S.C. §103

Claims 1-3 and 10-11 are rejected under 35 U.S.C. §103(b) as being unpatenable over Takenaka (JP '523) in view of Hiereth (US Patent 6,009,842). The rejection is respectfully traversed at least based on the ground that neither Takenaka nor Hiereth, when taken singly or in combination, teaches or suggests each and every feature recited in Claim 1.

The valve-operating system as recited in Claim 1 comprises a rocker arm having a valve abutment at one end thereof abutting against an engine valve and a cam abutment at the other end contacting with a valve-operating cam, and a pair of link arms each of which is supported at one end thereof on an engine body for swinging movement about an axis parallel to a rotational axis for said valve-operating cam and connected at the other end directly to the other end of said rocker arm for relative turning movement about an axis parallel to said rotational axis, said one end of at least any one of said link arms being swingably supported on said engine body for continuous

movement within a plane perpendicular to the rotational axis for said valve-operating cam, and wherein said rocker arm is formed to be gradually thicker from the valve abutment at the one end toward the cam abutment at the other end.

As admitted by the Examiner, Takenaka fails to disclose the rocker arm being formed to be gradually thicker from the valve abutment at the one end toward the cam abutment at the other end. The Examiner, however, relied on Hiereth for the obviousness rejection by alleging that Fig. 7 of Hiereth teaches such a feature. Applicants respectfully disagree.

In the arrangement of Fig. 7 of Hiereth, a shaft 27 is shown for pivotally supporting the intake valve operating lever 9 and exhaust valve operating lever 10. As shown in Figs. 7 and 8, when an exhaust cam 6 on a camshaft 2 pushes the exhaust valve operating lever 10, the lever 10 pivots around the shaft 27 and urges the exhaust valve 8 downwardly for opening. Applicants submit that the thickest portion in Hiereth is the portion where the cam 6 abuts the camshaft 2, i.e., the circular portion on lever 10, as shown in Fig. 7. The abutment portion is positioned intermediate between the right end and left end of the lever 10 and the portion of lever 10 on the right side of the circular portion becomes gradually thinner toward the right end (portion 27), which is on the contrary to the feature of Claim 1, where the rocker arm is formed to be gradually thicker from the valve abutment at the one end toward the cam abutment at the other end.

It is also noted that for the configuration disclosed in Hiereth, the shaft 27 is fixed, and the abutment portion shown by the circle has to be positioned intermediate between the opposite ends to allow the lever 10 to pivot around the fixed shaft 27. If the thickest

abutment portion was to be on the right end in Fig. 7, it would not be possible for the lever 10 to move pivotally around the shaft 27. That is, the configuration of Hiereth will not be functional if the lever 10 is gradually thicker from the valve abutment at the one end (i.e., the portion shown by circle) toward the cam abutment at the other end (i.e., the shaft 27.)

In view of the above, Applicants respectfully submit that it would not have been obvious for one skilled in the art to combine the rocker arm as taught by Hiereth with the device disclosed in Takenaka to achieve the valve-operating system of Claim 1 due to the above-mentioned defect of Hiereth. Accordingly, it is respectfully submitted that Claim 1 is allowable over the cited art.

For the similar reasons, Claims 2-3, 10, and 11 that depend from allowable Claim 1 are likewise allowable.

CONCLUSION


In view of the foregoing, reconsideration of the application, withdrawal of the outstanding rejections, allowance of the currently pending claims, and the prompt issuance of a Notice of Allowance are respectfully requested.

Should the Examiner believe anything further is desirable in order to place this application in better condition for allowance, the Examiner is requested to contact the undersigned at the telephone number listed below.

In the event this paper is not considered to be timely filed, the Applicants respectfully petition for an appropriate extension of time. Any fees for such an extension, together with any additional fees that may be due with respect to this paper,

may be charged to counsel's Deposit Account No. 01-2300, referencing Attorney Dkt.
No. 107348-00449.

Respectfully submitted,



Wan-Ching Montfort
Registration No. 56,127

Customer No. 004372
ARENT FOX LLP
1050 Connecticut Avenue, N.W., Suite 400
Washington, D.C. 20036-5339
Tel: (202) 857-6000
Fax: (202) 638-4810

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